

REMARKS

Reconsideration is respectfully requested. Claims 1-3 are present in the application. Claim 1 is canceled. Claims 2 and 3 are amended. New claim 4 is added.

Claims 1-3 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Letechin (WO 02/14412 A1). Applicant respectfully traverses.

The applicant has carefully analyzed the Examiner's arguments and is thankful for constructive recommendations. The applicant asks to take the following into consideration.

1. The applicant amends the claims of the invention. For clarity, the amendments to the independent claim are presented as new claim 4. When correcting the claims the applicant took into account the references to the known art - Letechin's publication (WO 02/14412) and patents US 4569749 and US 5389691 as well.

2. The applicant believes it necessary to attract the Examiner's attention to the following vital differences between the applied method and known method of polymer wastes processing disclosed in Letechin's publication.

2.1. Processing according to the known method is carried out under pressure of at least 6,1 MPa, and the applied method is carried out under pressure of up to 6,1 MPa that points to unobviousness of the claimed method.

2.2. In the known method Letechin teaches usage of the liquid fraction (after distillation) with a boiling point not lower than 210°C as a solvent at thermal fluidifying, i.e. mainly with a temperature higher than 210°C. Meanwhile in the claimed method the fraction obtained after catalytic reforming with the boiling temperature below 220°C is used as a solvent. Therefore, in the known and applied methods different possible change of temperature has place - upwards or downwards. This fact evidences unobviousness of the claimed method. In this claimed method only a part of fraction is used as a solvent, the other part is one of the target products.

2.3. An essential difference of the claimed method is also that Letechin's publication shows usage of the fraction with a boiling point not lower than 210°C as an additional component of the main solvent, which is alkyl benzene; and in the claimed method a part of the liquid fraction, as subjected to catalytic reforming, with the boiling temperature below 220°C is used as sole (main) solvent at recycling (thermal liquefaction and thermolysis) of a new batch of wastes. Moreover, according to the claimed method alkyl benzene and/or the gasoline fraction having a boiling temperature below 220° is used only at the start-up of the process of wastes recycling (at the start-up of the reactor).

2.4. *A main difference of the claimed method from Letechin's publication and all the documents cited by the Examiner is that the process of exactly thermal liquefaction and thermolysis of milled wastes (rubber crumb) is carried out in the PSEUDO-FLUIDIZED bed of the solvent FOR THE FIRST TIME.*

This characteristic feature directly points to unobviousness of the claimed method.

3. The cited patents US 4569749 and US 5389691 do not refer to processes of rubber-containing wastes recycling but teach only the possibility of usage of different distillate liquid fractions, formed while fuels recycling, as return heat-carriers but not return solvents participating in a chemical reaction.

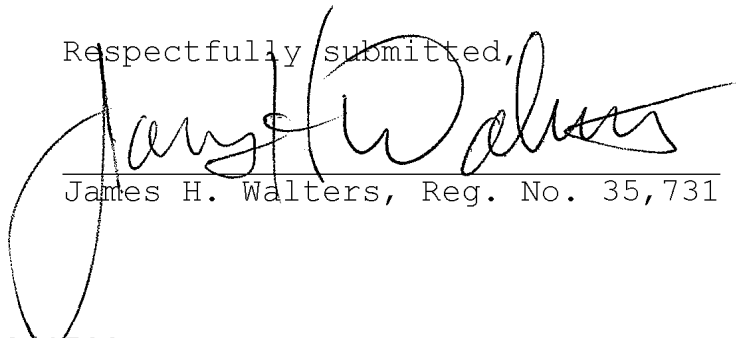
4. In the applicant's opinion basing on the aforesaid the claimed method of rubber-containing wastes recycling in connection with non-obvious but successfully found conditions of recycling, ingenious sequence of operations led to non-obvious result: increase of recycling efficiency, process economy raise (energy demands reduction), and increase of final products' quality.

Taking all the aforesaid into consideration the applicants asks the Examiner to consider the above arguments and grant the patent for the application.

The Examiner is asked to contact applicant's attorney at 503-224-0115 if there are any questions.

It is believed that no further fees are due with this filing in that the required fees are being submitted herewith. However, if additional fees are required to keep the application pending, please charge deposit account 503036. If fee refund is owed, please refund to deposit account 503036.

Respectfully submitted,

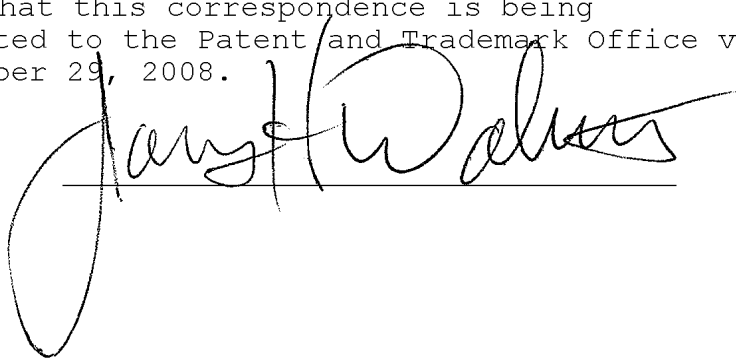
A large, stylized handwritten signature in black ink, appearing to read 'James H. Walters', is written over the typed name and registration number.

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